

CLAIMS:

1. A device for measuring torsional distortion of a body comprising: first and second clip portions each having a central part and two legs depending from the central part, each leg having adjacent the free end thereof a groove or a projection for engaging a respective projection or groove provided on or in the body to mount the clip portion on the body rotationally fast therewith; a bridge interconnecting the clip portions, the bridge being less stiff than the clip portions whereby relative rotational displacement of the clip portions caused by torsional distortion of the body will cause proportional deflection of the bridge; and measuring means for measuring the deflection of the bridge.
2. A measuring device according to claim 1 wherein the measuring means includes means for sensing the tensile and compressive direct strain components of the maximum shear strain, which acts at the centre of the bridge at $\pm 45^\circ$ to the longitudinal axis.
3. A measuring device according to claim 1 or claim 2, wherein the means for measuring deflection of the bridge is mounted on the bridge.
4. A measuring device according to claim 2 or claim 3, wherein the means for measuring deflection is a SAW device.
5. A measuring device according to any preceding claim, wherein the clip portions and the bridge are an integral, preferably metal, structure.
6. A measuring device according to any preceding claim, wherein the projections are ridges which are generally V-shaped in transverse cross-section and have substantially flat sides connected to each other by a curved ridge.
7. A measuring device according to claim 6, wherein the grooves are generally V-shaped in transverse cross-section and have generally flat sides.

8. A measuring device according to claim 7, wherein the included angle of the projections is less than the included angle of the grooves, and the grooves and ridges are so shaped that each ridge engages each groove along two lines of contacts spaced from the base of the groove.

9. A measuring device according to any of claims 6 to 8, wherein the included angle of the ridge is substantially 60° and the included angle of the groove is substantially 90° .

10. A measuring device according to any preceding claim in which the clip portions are resiliently deformable to allow the clip portions to be snapped into engagement with the grooves.

11. A measuring device according to any preceding claim, wherein the projections are on the legs and faced inwardly so that the clip portions may be mounted on grooves provided on the external surface of a shaft.

12. A measuring device according to any of claims 1-10, wherein the projections are on the legs and face outwardly so that the clip portions may engage grooves provided in the interior wall of a hollow body.